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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,152	01/03/2002	David A. Rockwell	PD-200113 (BOE 0148 PA	7805
7590	03/05/2004		EXAMINER RAHLL, JERRY T	
John S. Artz Artz & Artz, P.C. Suite 250 28333 Telegraph Road Southfield, MI 48034			ART UNIT 2874	PAPER NUMBER
DATE MAILED: 03/05/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/038,152

**Applicant(s)**

ROCKWELL ET AL.

**Examiner**

Jerry T Rahll

**Art Unit**

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 20-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 9-13, 16, 17 and 19 is/are rejected.
- 7) ☒ Claim(s) 6-8, 14, 15 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-19, drawn to a method for processing an optical communications signal, classified in class 385, subclass 31.
  - II. Claims 20-37, drawn to a satellite communications system, classified in class 398, subclass 118.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because any apparatus for processing an optical system may be used in place of the system of Invention I. The subcombination has separate utility such as for use with land-based networks.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Kevin Mierszwa on 20 February 2004 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-19.

Affirmation of this election must be made by applicant in replying to this Office action. Claims

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20-37 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

#### ***Drawings***

6. The drawings submitted have been reviewed and determined to facilitate understanding of the invention. The drawings are accepted as submitted.

#### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-5, 9-13, 16-17 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,487,331 to Hung.

9. Hung describes a method for processing an optical communications signal comprising coupling at least one first-optical signal (Input) into a primary first-optical circulator (830) input of a first-optical circulator (832), splicing a primary-first-optical-circulator output port (834) to a

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first 50:50 coupler input port (804) of a 50:50 coupler (801), employing a secondary first-optical circulator output port (836) of said first optical circulator as a first-optical fiber output port of said 50:50 coupler, splicing a primary second-optical circulator (820) output port (824) to a second 50:50 coupler input port (802) of said 50:50 coupler, employing a secondary second-optical circulator output port (826) as a second-optical fiber output port; splicing a first 50:50 coupler output port (803) to a first optical fiber, having a first optical fiber length, which is terminated with a first reflector (805) that returns any optical signals back toward said 50:50 coupler, splicing a second 50:50 coupler output port to a second optical fiber (807), having a second length (see 810), which is terminated with a second reflector (809) that returns any optical signals back toward said 50:50 coupler, said first and second reflectors having substantially the same reflection properties, interfering reflected signals from said first and second reflectors as they pass back through said 50:50 coupler, allowing interference products of said reflected signals to propagate back toward said first and second optical circulators, which direct said interference products to said first and second optical fiber output ports (see Col 8 Lns 12-24, and controlling and first and second fiber lengths and the properties of said reflectors so as to accomplish the desired optical processing in a manner that is resistant to varying environmental influences (see Figures 7-9 and Cols 7-8).

10. Hung further describes coupling at least one second optical signal (Add) into a primary second-optical circulator input of said second optical circulator, wherein said first and second optical circulators have substantially the same propagation characteristics.

11. Hung further describes the reflectors as Faraday rotator-mirrors (see Figure 14 and Cols 10-11).

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12. Hung further describes the system used as a multiplexer/demultiplexer or an optical switch (see Figure 9 and Col 8 Lns 25-44).

13. The apparatus of Claims 11-13, 16-17 and 19 are embodiments of the above described methods.

***Allowable Subject Matter***

14. Claims 6-8, 14-15 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 6-7 and 14-15 describe using a heating element to tune the fiber lengths. Claims 8 and 18 describe the system used as a DPSK demodulator. This is subject matter not described by the prior art of record.

***Conclusion***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry T Rahll whose telephone number is (571) 272-2356. The examiner can normally be reached on M-F (8:00-5:30), with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jerry T Rahll



**AKM ENAYET ULLAH**  
**PRIMARY EXAMINER**